

Appln. Serial No. 10/032,414  
Amendment Dated January 23, 2008  
Reply to Office Action Mailed November 27, 2007

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AMENDMENTS TO THE CLAIMS

**JAN 23 2008**

This listing of claims replaces all prior versions, and listings, of claims in the application:

- 1 1. (Original) A method of initiating a media call over a packet-switched network
- 2 comprising:-
- 3 (a) issuing a call set-up request at a first terminal having an address in a first address
- 4 range, the call set-up request being destined for a second terminal in a separate network having
- 5 an address in a second address range which overlaps with the first address range,
- 6 (b) passing the call set-up request to a first call server communicatively coupled to
- 7 the first address range,
- 8 (c) passing the call set-up request from the first call server to a second call server
- 9 communicatively coupled to the second address range,
- 10 (d) causing the call servers to negotiate a port at each respective addresses of the
- 11 terminals for subsequent communication once the call is set-up,
- 12 (e) providing a first address translator having a first range address in the first address
- 13 range,
- 14 (f) providing a second address translator having a second range address in the second
- 15 address range,
- 16 (g) causing the first call server to provide the first terminal with the first range
- 17 address of the first address translator as its destination address for the call,
- 18 (h) causing the second call server to provide the second terminal with the second
- 19 range address of the second address translator as its destination address for the call,
- 20 (i) arranging for the first address translator to pass data received at the first range
- 21 address from the first terminal at the negotiated port to the second address translator for onward
- 22 communication to the address of the second terminal at the negotiated port, and
- 23 (j) arranging for the second address translator to pass data received at the second
- 24 range address from the second terminal at the negotiated port to the first address translator for
- 25 onward communication to the address of the first terminal at the negotiated port,
- 26 whereby two-way communication is established between the first and second terminals
- 27 via the first and second address translators.

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1 2. (Original) A method according to claim 1, wherein the first and second address  
2 translators are integrated in a single device having external addresses in the first and second  
3 address ranges.

1 3. (Original) A method according to claim 1, wherein the first and second address  
2 translators each have a third range address in a third address range which is common between the  
3 address translators, wherein the respective third range address of the second address translator is  
4 provided to the first address translator by at least one of the call servers and vice versa, and  
5 wherein data passed between the address translators is passed via their respective third range  
6 addresses.

1 4. (Original) A method according to claim 1, wherein the call servers each have a fourth  
2 range address in a fourth address range which is common between the call servers.

1 5. (Original) A method according to claim 1, wherein the first and second address ranges  
2 are IANA reserved private IP address ranges as defined in RFC 1918.

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1 6. (Currently Amended) A first call server in a first packet-switched network comprising: -  
2 a terminal controller arranged to receive a call set-up request from an originating terminal  
3 in the first packet-switched network, wherein the first call server is responsive to the call set-up  
4 request to set up a ~~VoIP call~~ communications session from the originating terminal in the first  
5 packet-switched network having a first address range to a destination terminal in a second  
6 packet-switched network having a second address range that overlaps with the first address  
7 range, the terminal controller arranged to further provide the originating terminal with a first  
8 range address of ~~[[an]]~~ at least one address translator as its destination address for the call, the  
9 first range address being in the first address range;  
10 an address translator controller arranged to provide to the at least one address translator,  
11 an address of the originating terminal in the first network as derived from the call set-up request  
12 received by the terminal controller, and  
13 wherein the first call server is to communicate with a second call server in the second  
14 network to cause the second call server to assign a second range address of the at least one  
15 address translator as a destination address of the destination terminal, the second range address  
16 being in the second address range.

1 7. (Currently Amended) A first call server according to claim 6 including intra-server  
2 communication means arranged to communicate with ~~[[a]]~~ the second call server to obtain an IP  
3 address and port for the destination terminal which is under the control of the second call server  
4 and wherein the address translator controller is further arranged to provide the IP address and  
5 port of the destination terminal to the at least one address translator.

1 8. (Cancelled)

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1 9. (Currently Amended) A first address translator in a first network comprising:-  
2 a terminal port for communicating with a first terminal in the first network, wherein the  
3 first network has a first address range, and the first network further has a first call server, and  
4 wherein the first address translator has a first range address in the first address range,  
5 a translator port for communicating with a second address translator in a second network  
6 having a second range address in a second address range, the second address range overlapping  
7 with the first address range and  
8 a control port for communicating with the first call server, the first call server being  
9 adapted to provide the first terminal with the first range address of the first address translator as  
10 its destination address for the call;  
11 wherein when the first address translator receives a message at the first range address  
12 from the first terminal, the first address translator routes the message to the second address  
13 translator, the second address translator having the second range address that is assigned as the  
14 destination address of a destination terminal in the second network.

1 10. (Previously Presented) A first address translator according to claim 9, including a  
2 controller arranged to receive at the control port, information relating to an IP address of the  
3 second address translator which is reachable via the translator port and corresponding  
4 information relating to an IP address of the first terminal and to pass data received at the terminal  
5 port from the first terminal to the first address translator via the translator port.

1 11. - 12. (Cancelled)

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1 13. (Currently Amended) A first packet-switched network having a first address range, a  
2 first call server communicatively coupled to the first address range, a terminal having an address  
3 in the first address range and a first address translator having a first range address in the first  
4 address range, the first call server being arranged to provide the terminal with the first range  
5 address of the first address translator as its destination address for a call, to control the first  
6 address translator and to generate a mapping in the first address translator between the address of  
7 the terminal in the said first packet-switched network and a second range address of a second  
8 network address translator in a second packet-switched network having a second address range,  
9 the second address range overlapping with the first address range, the first address translator  
10 being arranged to communicate with the second address translator to allow communication with  
11 a second terminal in the second network, the first call server further being arranged to negotiate a  
12 port at the address of the first terminal for subsequent communication once a call is set-up, and  
13 the first call server to communicate with a second call server in the second packet-switched  
14 network to assign another second range address of the second address translator as a destination  
15 address of the second terminal.

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1 14. (Currently Amended) A method of setting up a call between a first packet-switched  
2 network and a second packet-switched network, the networks having first and second address  
3 ranges respectively, the first address range overlapping with the second address range, the  
4 method comprising:-  
5 receiving a call setup request from a first terminal in the first network, the call being  
6 destined for a second terminal in the second network,  
7 negotiating a port at the address of the first terminal for subsequent communication once  
8 the call is set-up,  
9 providing the first terminal in the first network with a first range address of a first address  
10 translator in the first network for use as the first terminal's destination address, the first range  
11 address being in the first address range,  
12 notifying the first address translator of an address to which data received from the first  
13 terminal in the first network should be passed, the address being for a second address translator  
14 having a second range address in the second address range and being situated in the second  
15 network, the second address translator being adapted to pass data received at the second range  
16 address to the second terminal through another second range address of the second address  
17 translator, wherein the another second range address is in the second address range and is  
18 assigned as a destination address of the second terminal,  
19 whereby two-way communication is established between the first and second terminals  
20 via the first and second address translators.

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1 15. (Currently Amended) Software in a computer readable medium which when executed on  
2 suitable hardware in a call server causes the hardware to carry out the steps of:-  
3 receiving a call setup request from a first terminal in a first network, the call being  
4 destined for a second terminal in a second network, the first network and the second network  
5 having a first address range and second address range respectively, the first address range  
6 overlapping with the second address range,  
7 negotiating a port at the address of the first terminal for subsequent communication once  
8 the call is set-up,  
9 providing the first terminal in the first network with a first range address of a first address  
10 translator in the first network for use as the first terminal's destination address, the first range  
11 address being in the first address range,  
12 notifying the first address translator of an address to which data received from the first  
13 terminal in the first network should be passed, the address being for a second address translator  
14 having a second range address in the second address range and being situated in the second  
15 network, the second address translator being adapted to pass data received at the second range  
16 address to the second terminal through another second range address of the second address  
17 translator, wherein the another second range address is in the second address range and is  
18 assigned as a destination address of the second terminal,  
19 whereby two-way communication is established between the first and second terminals  
20 via the first and second address translators.

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1 16. (Currently Amended) A method of translating addresses between terminals in first and  
2 second packet-switched networks having first and second address ranges respectively, the first  
3 address range overlapping with the second address range, the method comprising:-  
4 receiving at a first address translator in the first packet-switched network notification  
5 from a call server of the address of a first terminal in the first packet-switched network which  
6 will be sending data, the call server being communicatively coupled to the first address range and  
7 the first address translator having a first range address in the first address range,  
8 receiving notification of an address of a second address translator in the second  
9 packet-switched network, the address being a second range address in the second address range  
10 and being the address to which data should be sent when received by the first address translator  
11 from the first terminal in the first packet-switched network,  
12 receiving data from the first terminal in the first packet-switched network and  
13 forwarding, by the first address translator, the data to the address of the second address  
14 translator, the second address translator being adapted to pass communication sent by the first  
15 terminal and received from the first address translator to a second terminal in the second network  
16 having an address in the second address range, wherein the second address translator has another  
17 second range address in the second address range that is assigned as a destination address of the  
18 second terminal in the second network.



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1 17. (Currently Amended) Software in a computer readable medium which when executed on  
2 suitable hardware in a first address translator in a first network causes the hardware to carry out  
3 the steps of:-

4 receiving notification from a call server of the address of a first terminal in the first  
5 network which will be sending data, the first network having a first address range, the call server  
6 being communicatively coupled to the first address range and the first address translator having a  
7 first range address in the first address range,

8 receiving notification of an address of a second address translator in a second network, to  
9 which data should be sent by the first address translator when received from the first terminal in  
10 the first network, the second network having a second address range which overlaps with the first  
11 address range and the address of the second address translator being a second range address in  
12 the second address range,

13 receiving data from the first terminal in the first network and forwarding the data to the  
14 address of the second address translator, the second address translator being adapted to pass  
15 communication sent by the first terminal and received from the first address translator to a  
16 second terminal in the second network having an address in the second address range, wherein  
17 the second address translator has another second range address in the second address range that  
18 is assigned as a destination address of the second terminal in the second network.

1 18. (Previously Presented) A first call server according to claim 6, which arranges for the  
2 originating terminal to view a first virtual gateway in the address translator as a destination for  
3 the originating terminal, wherein the first virtual gateway has the first range address.

1 19. (Currently Amended) A first call server according to claim 18, which communicates  
2 with [[a]] the second call server in the second packet-switched network to cause the second call  
3 server to assign a destination address of a second virtual gateway in the at least one address  
4 translator as [[a]] the destination address of the destination terminal.

1 20. (Cancelled)